Volume 179, Issue 1, September 2003

1 Editor's Choice

THEME: GAP-JUNCTIONAL HEMICHANNELS

3 Foreword
L. Reuss

5 Physiology and biophysics of hemi-gap-junctional channels expressed in *Xenopus* oocytes
L. Ebihara

9 Gap junction hemichannels in astrocytes of the CNS
J. C. Sáez, J. E. Contreras, F. F. Bukauskas, M. A. Retamal and M. V. L. Bennett

23 Gap junctional hemichannels in the heart
S. John, D. Cesario and J. N. Weiss

33 Do connexin 43 gap-junctional hemichannels activate and cause cell damage during ATP depletion of renal-tubule cells?
L. Vergara, X. Bao, E. Bello-Reuss and L. Reuss

REVIEW

39 Metabolic factors contributing to altered Ca^{2+}regulation in skeletal muscle fatigue
D. S. Steele and A. M. Duke

CARDIOVASCULAR

49 Hemichrome formation observed in human haemoglobin A under various buffer conditions
Y. Sugawara, E. Kadono, A. Suzuki, Y. Yukuta, Y. Shibasaki, N. Nishimura, Y. Kameyama, M. Hirota, C. Ishida, N. Higuchi, K. Haramoto, Y. Sakai and H. Soda

61 Validity of the microdialysis technique for experimental *in vivo* studies of myocardial energy metabolism
M. Kavianipour, G. Wikström, G. Ronquist and A. Waldenström

EXERCISE

67 Association between fatigue and failure to preserve cerebral energy turnover during prolonged exercise
L. Nybo, K. Møller, B. K. Pedersen, B. Nielsen and N. H. Secher

75 Effects of eccentric treadmill running on mouse soleus: degeneration/regeneration studied with Myf-5 and MyoD probes
A.-S. Armand, T. Launay, B. D. Gaspera, F. Charbonnier, C. L. Gallien and C. Chanoine

RENAL

85 Perfusate composition influences nitric oxide homeostasis in rat juxtamedullary afferent arterioles
J. Pittner, M. Wolgast and A. E. G. Persson

MISCELLANEOUS

93 Non-linear dependence of interstitial fluid pressure on joint cavity pressure and implications for interstitial resistance in rabbit knee
D. Scott, J. R. Levick and G. Miserocchi

Volume 179, Issue 2, October 2003

103 Editor's Choice

THEME:MOLECULAR REGULATION OF NITRIC OXIDE SYNTHASES

105 Foreword
P. A. Ortiz

107 Trafficking and activation of eNOS in epithelial cells
P. A. Ortiz and J. L. Garvin

115 NOS 3 subcellular localization in the regulation of nitric oxide production
J. C. Sullivan and J. S. Pollock

123 From molecules to mammals: what's NOS got to do with it?
I. N. Mungrue, D. S. Bredt, D. J. Stewart and M. Husain

137 Protein–protein interactions involving inducible nitric oxide synthase
W. Zhang, T. Kuncewicz, Z.-Y. Yu, L. Zou, X. Xu and B. C. Kone

CARDIOVASCULAR

143 Role of Ca^{2+}-activated Cl^- current during proarrhythmic early afterdepolarizations in sheep and human ventricular myocytes
A. O. Verkerk, H. L. Tan, J. H. Kirkels and J. H. Ravesloot

CELL BIOLOGY

149 A physiological role for protoporphyrin IX photodynamic action in the rat Harderian gland?
Z. J. Cui, Y. D. Zhou, Y. Satoh and Y. Habara

EXERCISE

155 Effects of exercise on platelet and aortic functions in aged rats
Y. Tanaka, M. Hashimoto and S. Masumura

MUSCLE
167 Muscle fibre size and capillarity in Korean diving women
K. A. Bae, N. Y. An, Y. W. Kwon, C. Kim, C. S. Yoon, S. C. Park and C. K. Kim

NERVOUS SYSTEM
173 Lack of efficacy of 'naked' small interfering RNA applied directly to rat brain
R. Isacson, B. Kull, P. Salmi and C. Wahlestedt

RENAL
179 Caveolae, caveolin and cav-p60 in smooth muscle and renin-producing cells in the rat kidney
M. Voldstedlund, L. Thuneberg, J. Tranum-Jensen, J. Vinten and E. I. Christensen

189 Facilitation of renal autoregulation by angiotensin II is mediated through modulation of nitric oxide
Z. Guan, D. A. Willgoss, A. Matthias, S. W. Manley, S. Crozier, G. Gobe and Z. H. Endre

RESPIRATORY
203 Endotoxin-induced shock in the pig – limited effects of low and high concentrations of inhaled nitric oxide
R. J. M. Middelveld and K. Alving

Volume 179, Issue 3, November 2003

213 Editor's Choice

THEME: REDOX REGULATION OF RENAL FUNCTION AND ARTERIAL PRESSURE
215 Foreword
R. D. Manning Jr
217 Redox regulation of the afferent arteriole and tubuloglomerular feedback
C. S. Wilcox
225 The role of reactive oxygen species in the regulation of tubular function
J. L. Garvin and P. A. Ortiz
233 Reactive oxygen species and molecular regulation of renal oxygenation
A.-P. Zou and A. W. Cowley Jr
243 Renal and vascular oxidative stress and salt-sensitivity of arterial pressure
R. D. Manning Jr, S. Meng and N. Tian

CARDIOVASCULAR
251 Identification and regulation of the gastric H^+/K^+-ATPase in the rat heart
V. Beisvag, G. Falck, J. P. Loennechen, G. Qvigstad, P. Jynge, T. Skomedal, J.-B. Osnes, A. K. Sandvik and Ø. Ellingsen
263 Stunning and myocardial contractile autoregulation studied on the isolated isovolumic blood-perfused dog heart
P. J. F. Tucci, O. Sant'Ana Jr, R. J. Nogueira, N. Murad, A. C. Lopes, A. Sañudo and C. A. Peres

273 Mechanism of acidic pH-induced contraction in spontaneously hypertensive rat aorta: role of Ca^{2+} release from the sarcoplasmic reticulum
D. K. Rohra, S.-Y. Saito and Y. Ohizumi

ENDOCRINOLOGY AND METABOLISM
281 Increased plasma concentrations of vasopressin, oxytocin, cortisol and the prostaglandin $F_{2\alpha}$ metabolite during labour in the dog
K. Olsson, A. Bergström, H. Kindahl and A.-S. Lagerstedt

EXERCISE
289 Treadmill exercise in mice increases intestinal lymphocyte loss via apoptosis
L. Hoffman-Goetz and J. Quadrilatero

GASTROINTESTINAL
299 Role of prostaglandins in lipopolysaccharide effects on K^+-induced contractions in rabbit small intestine
E. Rebollar, E. Guerrero-Lindner, M. P. Arruebo, M. A. Plaza and M. D. Murillo

RENAL
309 Visualization of nitric oxide production and intracellular calcium in juxtamedullary afferent arteriolar endothelial cells
J. Pittner, R. Liu, R. Brown, M. Wolgast and A. E. G. Persson

Volume 179, Issue 4, December 2003

319 In Memoriam: Börje Uvnäs, 1913–2003
J. Henriksson, O. M. Sejersted and H. Aars
321 Editor's Choice

THEME: NEW ROLES FOR AMMONIA IN RENAL ION TRANSPORT

323 Foreword
I. D. Weiner
325 Mechanisms of NH_4^+ and NH_3 transport during hypokalemia
S.M. Wall
331 Renal and hepatic expression of the ammonium transporter proteins, Rh B Glycoprotein and Rh C Glycoprotein
I. D. Weiner and J. W. Verlander

REVIEW

339 Novel Ca^{2+} signalling mechanisms in vascular myocytes: symposium overview
P.-L. Li, H. C. Lee, M. T. Nelson, G. A. Meininger and C. Van Breemen

CARDIOVASCULAR

353 Myocardial vasoactive intestinal peptide and fibrosis induced by nitric oxide synthase inhibition in the rat
V. Z. C. Ye, G. Hodge, J. L. C. Yong and K. A. Duggan
361 Non-invasive assessment of cardiac output during exercise in healthy young humans: comparison between Modelflow method and Doppler echocardiography method
J. Sugawara, T. Tanabe, M. Miyachi, K. Yamamoto, K. Takahashi, M. Iemitsu, T. Otsuki, S. Homma, S. Maeda, R. Ajisaka and M. Matsuda

GASTROINTESTINAL

367 Antisecretory factor peptide derivatives specifically inhibit [^{3}H]-γ-amino-butyric acid/$^{36}Cl^-$ out → in permeation across the isolated rabbit Deiters' neuronal membrane
M. V. Rapallino, A. Cupello, S. Lange and I. Lönnroth
373 Effect of α-trinositol on secretion induced by *Escherichia coli* ST-toxin in rat jejunum
A.-M. Lahti, J. Cassuto, L. Yregård, L. Lindblom, R. Sinclair and P. Tarnow

MUSCLE

381 Oestrogen receptor β is expressed in adult human skeletal muscle both at the mRNA and protein level
A. Wiik, B. Glenmark, M. Ekman, M. Esbjörnsson-Liljedahl, O. Johansson, K. Bodin, E. Enmark and E. Jansson
389 Human motor compensations for thixotropy-dependent changes in resting wrist joint position after large joint movements
H. W. Axelson and K.-E. Hagbarth

MISCELLANEOUS

399 Increased tissue survival in experimental skin flaps in mast cell-deficient rats
Y. Guo, L. Törkvist, J. Raud and P. Hedqvist

407 Author index
411 Subject index
413 Acknowledgements to Referees